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FORAGE SPECIES AND SEASONS FOR RESEEDING FOOTHILL RANGE LANDS IN NORTHEASTERN WASHINGTON

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Reseeded and properly managed, many acres of plowed and abandoned or otherwise deteriorated foothill range land in northeastern Washington could produce greatly increased amounts of palatable herbage and livestock products. These lands, particularly abundant in Stevens and Ferry Counties, constitute a vital link, in many livestock operations, between national forest or other summer ranges and crop aftermath on the ranches in the fall and between ranch-stored livestock feeds and summer ranges in the spring.

Research conducted since late 1948 by the Northern Rocky Mountain Forest and Range Experiment Station has provided preliminary answers to the questions of species and seasons for planting. Spring and fall plantings of about 25 species, strains, and varieties of forage plants on an area of well drained sandy loam soil lying at an elevation of 2,450 feet near Republic, Washington, and receiving 12 to 15 inches of precipitation annually, have provided this information. However, much information must still be made available and many questions answered before improvement of these lands can be undertaken on an extensive basis.

PROMISING FORAGE PLANTS

Based on herbage production during their second growing season and general vigor, distribution, and appearance of plants in the stand, six forage species were outstanding in these tests and quite similar in performance. Outstanding species were pubescent wheatgrass, Manchar smooth bromegrass, Bromar mountain brome, Aberystwyth strain of orchardgrass, common mountain brome, and crested wheatgrass. Knowledge that these species may be reasonably well adapted to northeastern Washington conditions provides a basis for their further use on abandoned plowed lands. Numerous other tests have proven the grazing value of these forage plants.

A group of species that grew fairly well in these trials but produced less herbage and less satisfactory stands than the above species included

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intermediate wheatgrass, Whitmar bluebunch wheatgrass, bluestem wheatgrass, sheep fescue, and Russian wildrye.

Complete failures were experienced with several species of bluegrass and with timothy, Alta fescue, green needlegrass, and the superior strain of Reed canarygrass.

SPRING VERSUS FALL PLANTING

Stands from spring seedings were superior in vigor, density, distribution of plants, and all other characters rated to stands produced from fall seedings. This was true of spring 1950 versus fall 1949 plantings as well as spring 1949 compared with fall 1948 for every species except crested wheatgrass. Herbage production was sampled only on plots that had completed two growing seasons. Although further study of fall versus spring planting is planned it is significant that every species, except crested wheatgrass, in these first tests rated better stands and produced more herbage from spring-seeded plots than from plots seeded the previous fall.

If an area to be reseeded has currently produced a grain crop it would probably be advisable, costs and all other factors considered, to plant in the stubble without seedbed preparation during the fall. Areas which have lain idle for several years usually require plowing for seedbed preparation and removal of competing vegetation. Although these tests indicated that either spring or fall seeding would give satisfactory stands, spring seeding on a clean, firm seedbed in such cases would probably be preferable.

PLANTING METHODS

Tests of planting methods have not yet been conducted on foothill areas in northeastern Washington, but many detailed studies carried out elsewhere by numerous individuals and agencies have shown that by all odds drilling is the best way to plant seed of forage species. An ordinary grain drill is well adapted for handling seed of all the species discussed herein. Uniform planting of the seed at the desired depth and use of only the intended amount of seed are assured by drilling. In some cases hand broadcasting followed by harrowing, dragging, or disking to cover the seed lightly has given good results. Under certain conditions, such as immediately following timber or brush fires where fresh ashes were available for covering the seed, or in aspen or mountain brush types where the seed was covered during leaf fall, airplane broadcasting has resulted in satisfactory stands. Methods other than drilling are usually most applicable to poorly accessible areas or where particular surface conditions warrant their use.

SUMMARY

Species adaptation trials conducted since 1948 have indicated that several improved forage species appear to be well adapted to conditions found on abandoned plowed lands in northeastern Washington. Although both fall and spring planting produced satisfactory stands, the best stands to date have resulted from spring seedings on clean, newly prepared but firm seedbeds.

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